

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A distillation apparatus for subjecting a crude readily polymerizable compound to distillation under vacuum conditions to purify the same, the apparatus comprising:

a distillation column;

a reflux tank having an inlet, an outlet and a vapor phase connecting port, the outlet being connected to the distillation column;

a condenser having a condensing fluid inlet and a condensing fluid outlet, the condensing fluid inlet being supplied with fluid from the distillation column and the condensing fluid outlet being connected to the reflux tank inlet;

a vacuum generator connected to the vapor phase connecting port of the reflux tank through an exhaust gas conduit of the vacuum generator;

a pressure control valve connected to the exhaust gas conduit of the vacuum generator; and

a pressure controller connected to the pressure control valve, the pressure controller having a pressure detection line.

2. (Previously Presented) The apparatus according to claim 1, wherein the apparatus has a distillation column main body and a reboiler into which a column bottom liquid of the column main body is introduced through an introducing tubular member, the introducing tubular member connecting to the side face of the column main body.

3. (Previously Presented) The apparatus according to claim 1, further comprising:

a perforated tray with a number of pores penetrating from an upper face of the tray to a back face thereof, and a surrounding projection wall hanging down from the back face of the tray is provided in the outer periphery of the lower end of the pores is used, the perforated tray being disposed inside the distillation column.

4. (Previously Presented) The apparatus according to claim 1, wherein the vacuum generator is a steam driven ejector, and the readily polymerizable compound is (meth)acrylic acid.

5-20. (Canceled)

21. (Previously Presented) The apparatus according to claim 1, wherein the pressure detection line of the pressure controller is connected to a fluid line connecting the distillation column to the condenser.

22. (Previously Presented) The apparatus according to claim 1, wherein the pressure detection line of the pressure controller is connected to the reflux tank.

23. (Currently Amended) The apparatus according to claim 3, wherein the perforated ~~tray plate~~ is a weir-free perforated tray, openings of the weir-free perforated tray are positioned on respective intersections of an oblique lattice comprising a first group of lines aligned in parallel at even intervals and a second group of lines oblique to the first group of lines and aligned in parallel at even intervals with respect to a local opening rate (B/A) that is a ratio of a sum B of areas of openings of a region comprising a parallelogram surrounded by the oblique lattice to an area A of the region and a ratio u/S of a total area u of all of the

openings to a column sectional area S , a value of $(u/S) / (B/A)$ ratio is 0.67 or more, a flow rate dropping along an edge of the opening is $0.035 \text{ m}^3/\text{m}\cdot\text{h}$ or more, the distillation column has a column diameter of 1.2 m or more, and an oxygen concentration in a gas within the distillation column is from 0.008 to 0.1 % by mole.

24. (Previously Presented) The apparatus according to claim 1, further comprising:
a supply of a polymerization inhibitor solution prepared using waste water containing (meth)acrylic acid generated in a vacuum source of the distillation apparatus.

25. (Previously Presented) The apparatus according to claim 2, wherein the column main body is provided with a pot part projecting downward in the lower end thereof, and the introducing tubular member connects to the side face of the pot part.

26. (Previously Presented) The apparatus according to claim 2, wherein a tubular member for discharging a column bottom liquid is projected downward from the lower end of the column main body, and the introducing tubular member connects to the side face of the discharging tubular member.

27. (Previously Presented) The apparatus according to claim 26, wherein a ratio (a/b) of a pipe size a of the discharging tubular member to a pipe size b of the introducing tubular member is 0.5 or more.

28. (Previously Presented) The apparatus according to claim 2, wherein a vicinity of an upstream end of the introducing tubular member is horizontal or ascends toward a downstream side.

29. (Previously Presented) The apparatus according to claim 23, wherein the opening is a circle having a diameter of from 10 to 30 mm, and when an interval of the first group of lines is defined as p_1 , an interval of the second group of lines is defined as p_2 , and an internal angle taken by the first group of lines and the second group of lines is defined as θ , relationships of $(1 \leq p_2/p_1 \leq 2)$ and $\{\cos^{-1}(p_2/2p_1) \leq \theta \leq \pi/2\}$ (wherein $\theta \geq \pi/4$) are satisfied.

30. (Previously Presented) The apparatus according to claim 23, wherein the value of (B/A) is from 0.17 to 0.28, and the value of $(u/S) / (B/A)$ is from 0.67 to 0.90.